



Selected National Innovation Policy Structures

Brief outlines of national advisory bodies

Australia

The Prime Minister's Science, Engineering and Innovation Council (PMSEIC) Location of the Council in the government structure: Department of Education, Science and Training

1. Composition

The Council comprises three types of members: ministerial members, *ex officio* representatives of major science agencies and science and industry representatives, and members chosen in their personal capacity.

2. Line of advice

- Reports to the Prime Minister
- Part of the government department with responsibility for science and technology

3. Functions

- Serving as the Australian government's principal source of independent advice on issues in science, engineering and innovation and relevant aspects of education and training
- Advising on important issues in science, technology, engineering and relevant aspects of education and training, including their relationship to economic growth, employment creation, the development of new industries and the sustainable development of new resources
- Examining the country's science and engineering capabilities and the effectiveness of their organisation and utilisation
- Examining the contribution of science, technology and engineering to the country's innovative capacity and economic and social development.
- Enhancing awareness among the community of the importance of science, technology and engineering

4. Priorities

- Australia's information and communications technology (ICT) research base
- Australian involvement in international science facilities
- Commercialisation of public sector research
- Innovation in the Australian film industry

5. Selected reports

- Australian Industry's Sustainable Competitiveness
- Beyond Kyoto – Innovation and Adaptation
- Australia's Innovative Future
- Developmental Health and Well-being: Australia's Future

Available at: www.dest.gov.au/science/pmseic/pmseic.html



Chief Scientist

Dr Robin Batterham

- Advises the Australian government on the contributions of science, technology and innovation to national goals, and assists in ensuring that public investment in science and technology is properly focused on issues of national priority.
- The Chief Scientist's advice remains genuinely independent, and is based on close and continuing contact with industry and research communities.

Functions

- Providing advice on science, technology and innovation issues to the Prime Minister and ministers.
- Providing a link between government and science, engineering and innovation industry groups
- Serving as an executive officer of the Prime Minister's Science, Engineering and Innovation Council, advising on Council membership and agenda items and ensuring the quality of the Council's work
- Chairing the Council's Standing Committee (comprising the non-ministerial members of the Council), which discusses strategy and direction for the Council and current issues in science, engineering and innovation

Priorities

- In 1999–2000, the Chief Scientist was involved in reviews of Australia's science capacity and of marine research in tropical Australia.
- In 2000–2001, he finalised a report entitled *The Change to Change*, to which the government responded with the *Backing Australia's Ability* action plan.
- In 2001–2002, Dr Batterham conducted a review of the external earning targets policy that applies to the Commonwealth Scientific and Industrial Organisation (CSIRO).
- During 2003, Dr Batterham provided advice to the Minister for Science on the adequacy of national priority implementation plans submitted to the government by research and research funding agencies.

Website: www.dest.gov.au/chiefscientist/



Brazil

Conselho Nacional Desenvolvimento Científico e Tecnológico (CNPq)

National Council of Scientific and Technological Development

Location of the Council in the government structure: Ministry of Science and Technology

1. Composition

The Council comprises the President and Vice-President, the presidents of the Studies and Projects Financing Entity and the Calgary Arts Partners in Education Society, the executive secretary of the Ministry of Science and Technology (MST) and representatives of the science and technology and business communities.

2. Line of advice

Linked to the Ministry of Science and Technology

3. Function

- Promoting and stimulating the scientific and technological development of the country
- Contributing to the formulation of national science and technology policy
- Supporting science, technology and innovation and contributing to the training of researchers
- Increasing the production of knowledge and the generation of new growth opportunities

4. Priorities

- Importance and strategic potential of leading-edge research
- Research with direct impacts on the productive sector: human resources
- Research with social ramifications targeted towards generating knowledge capable of producing practical solutions to problems inherent in a developing society
- Preserving natural resources and thereby improving the quality of human life and survival

5. Selected reports

- Investing in the Future
- The Demands of the New Economy: Creativity and Experimentation
- Towards Digital Inclusion
- S&T at the Service of the Environment

Available at: www.cnpq.br



Canada

Advisory Council on Science and Technology (ACST)

Location of the Council in the government structure: Ministry of Industry

1. Composition

Appointed by the Prime Minister and comprising university professors, vice-chancellors, heads of research institutions and heads of private entities. The secretariat is provided by the Deputy Minister of Industry.

2. Line of advice

- The Council reports to the Prime Minister and is chaired, in principle, by the Minister of Industry.
- It has access to the Prime Minister.
- The Council reports to the Minister of Industry, but the deputy minister is the secretary of Council, and the assistant is the Chief Director of the secretariat.

3. Functions

- Advising on the enhancement of a knowledge-based economy through the promotion of the required skills
- Advising on bridging the gap in the innovation chain from technology prototypes to market introduction
- Advising on science and technology issues to the Cabinet Committee for the Economic Union
- Responding to questions by the Prime Minister

4. Priorities

- Expert panel on critical skills required by industry
- Expert panel on the commercialisation of university research
- The role of Canada in international science and technology
- Determining the indirect costs of research at universities

5. Selected reports

- Stepping up: Skills and Opportunities in the Knowledge Economy
- Public Investment in University Research
- Reaching out: Canada, International Science and Technology, and the Knowledge-based Economy
- Creating a Sustainable University Research Environment in Canada

Available at: www.acst-ccst.gc.ca



Finland

Science and Technology Policy Council

Location of the Council in the government structure: Ministry of Education

1. Composition

The Prime Minister is the chairman, deputised by the Minister of Trade and Industry and the Minister of Education. The Council comprises other ministers, directors-general, well as experts from and heads of private and public entities.

2. Line of advice

The Council is answerable to the Prime Minister, through the ministries of Education and Trade and Industry.

3. Functions

- Advising the government and its ministries on questions relating to science and technology
- Taking responsibility for the strategic development and coordination of Finnish science and technology policy
- Taking responsibility for the national innovation system

4. Priorities

- Education, research, product development and knowledge-intensive business (e.g. biotechnology)
- International cooperation in science and technology
- Development of centres of excellence.
- Commercialisation of research findings
- Monitoring and evaluation of science and technology performance

5. Selected reports

- Triennial science and technology policy reviews:
 - o 2003 Review: Knowledge, Innovation and Internationalisation, an online publication
 - o Review 2000: The Challenge of Knowledge and Know-how
 - o Review 1996: Finland: A Knowledge-based Society
 - o 1993 Review: Towards an Innovative Society: A Development Strategy for Finland.
 - o Review 1990: Guidelines for Science and Technology Policy in the 1990s

Available at: www.minedu.fi



Germany

Wissenschaftsrat (Science Council)

Location of the Council in the government structure: Federal Ministry of Education, Science, Research and Technology (Bundesministerium für Bildung, Wissenschaft, Forschung und Technologie – BMMF)

1. Composition

Comprises the Scientific Commission (32 members, appointed by the Federal President) and the Administrative Commission (22 members, 16 from the state governments and six from federal government)

2. Line of advice

- The Council advises the federal and state governments.
- It issues recommendations and prepares reports on the structure, performance, development and financing of scientific institutions (universities, higher technical colleges, extra-university research institutions), as well as addressing general questions on the higher education system.
- The plenary assembly annually sets up a work programme, with committees and working groups, to work on individual projects, assisted by outside experts.
- Draft documents are adopted by the plenary.
- The reports and recommendations are published.

3. Functions

- Advising the federal and state governments on the development of higher education institutions and the scientific and research sectors
- Promoting scientific work in Germany
- Acting as mediating body between scientists and policy-makers, as well as between federal and state governments

4. Priorities

- Higher education and scientific careers
- Research
- University planning
- Medicine
- Evaluation and quantitative analyses

5. Selected reports

- Statement by the Scientific Commission of the German Science Council on Questions concerning European Research Policy (March 2004)
- Theses for the future development of the system of higher education and research in Germany
- Statement of the German Science Council on the Hermann von Helmholtz Association of German Research Centres
- Statement on the Positron-Emission-Tomography (PET) at University Hospitals and Extra-University Research Institutions

Available at: www.wissenschaftsrat.de/wr_engl.htm



India

Technology Information Forecasting and Assessment Council (TIFAC)

Location of the Council in the government structure: Ministry of Science and Technology

1. Composition

The Council comprises eminent persons, drawn from captains of industry, financial institutions, central government, national research and development laboratories and academia.

2. Line of advice

Forms part of the government department of science and technology

3. Functions

- Undertaking technology assessment and forecasting studies in key areas of the national economy
- Observing global trends and formulating preferred options for India
- Establishing a nationally accessible technology information system
- Promoting key technologies

4. Priorities

- Technology assessment and forecasting
- Home-grown technology programme
- Patent facilitation
- Technology promotion centre

5. Selected reports

- Technology Vision: 2020 for India
- Comprehensive Picture of Science and Technology in India
- Techno-Market Surveys
- Advanced Composition Mission

Available at: www.tafic.org.in/abt/gov.html



Ireland

Irish Council for Science, Technology and Innovation (ICSTI)

Location of the Council in the government structure: Ministry of Science and Technology

1. Composition

The Council has 25 members. The National Policy Advisory Board for Enterprise, Trade, Science, Technology and Innovation (Forfás) provides the secretariat.

2. Line of advice

- Advises the Minister of Science and Technology on policy-related issues in response to specific requests from the government
- Task forces bring forward draft recommendations on agreed priority topics for ratification by the Council

3. Functions

- Advising on science and technology policy-related issues in response to specific requests from the government
- Taking the initiative in advising the Minister of Science and Technology, the science and technology unit within the Department of Enterprise, Trade and Employment and the Board of Forfás on policy for science and technology and related matters
- Advising the Minister on the strategy for the preparation and implementation of national programmes in science, technology and innovation
- Advising the Minister on the strategic direction for state investment in science, technology and innovation
- Establishing sub-groups and panels to assist the Council in performing its functions

4. Priorities

- Education
- Scientific research, technology, and research and development in industry
- Prioritisation of state spending in science, technology and innovation
- Public awareness of science, technology and innovation issues

5. Selected reports

- EU Debate on the Role of Fundamental Research
- Investing in Research, Technology and Innovation (RTI) for the Period 2000 to 2006
- Benchmarking School Science, Technology and Mathematics Education in Ireland against International Good Practice
- Technology Foresight Reports 1999

Available at: www.forfas.ie/icsti/index.html



Ireland

National Policy Advisory Board for Enterprise, Trade, Science, Technology and Innovation (Forfás)

Location of the Council in the government structure: Department of Enterprise, Trade and Employment

1. Composition

The current members (14) include representatives of related state agencies, the Secretary-General of the Department of Enterprise, Trade and Employment and a panel of business, economic and other specialists.

2. Line of advice

- The Minister for Enterprise, Trade and Employment appoints the board members.
- Forfás is responsible for providing policy advice to government on enterprise, trade, science, technology and innovation in Ireland.

3. Functions

- Developing and coordinating industrial policy for state bodies, such as Enterprise Ireland and IDA Ireland (government agency with responsibility for securing new investment)
- Promoting scientific research and innovation
- Research, analysis and policy advice on competitiveness and economic development

4. Priorities

- Competitiveness and innovation
- Science and technology
- Enterprise
- National accreditation

5. Selected reports

- Innovation Networks: a Review of Innovation Networks throughout Ireland
- Employment Survey 2003
- National Code of Practice for Managing Intellectual Property from Publicly Funded Research
- Review of the Role of County and City Enterprise Boards in the Development of Micro-enterprises

Available at: www.forfas.ie

Chief Science Advisor

1. Line of advice

- Answerable to the Irish government at large, with no specific attachment to any ministry or department but based at Forfás
- Assumes an oversight function with respect to Irish economic, science and technology and innovation issues



2. Functions

- Advising national government on issue pertaining to research investment
- Overseeing a system of independent evaluation of science policy and programmes across a range of issues
- Advising on matching resources to expected performance
- Exploring and exploiting science to professionally optimise the enterprise environment through the involvement of stakeholders
- Liaising with countries of the European Union and elsewhere

4. Priorities

- Nanotechnology and the life sciences
- Re-branding Ireland
- Transforming the teaching of science in schools and universities and making broadband more widely available
- Meeting ethical standards and clarifying ethical issues in science



Japan

Council for Science and Technology Policy (CSTP)

Location of the council in the government structure: Ministry of Education, Culture, Sports, Science and Technology

1. Composition

The Council is chaired by the Prime Minister and comprises ministers with science and technology functions, university professors and heads of private companies. The director-general is responsible for the secretariat of the Council.

2. Line of advice

- Meets monthly to report to the Prime Minister and cabinet
- The Council reports to the Prime Minister, but the chairperson is the Director-General of Science and Technology Policy.

3. Functions

- Investigating and discussing issues such as:
 - Policy to promote science and technology
 - Policy for the allocation of resources for science and technology
 - Evaluation of scientific research projects
- Advising the Prime Minister and cabinet on issues pertaining to science and technology

4. Priorities

- Strategy on promoting science and technology
- Guidelines on the evaluation method for research and development
- Policy on the allocation of funds for promoting science and technology
- Promoting business–academia–government collaboration

5. Selected reports

- Annual Report on the Promotion of Science and Technology 2002
- Internationalizing Strategy for Science and Technology Activities
- Promotion of Science and Technology for Humanitarian Demining

Available at: www.mext.go.jp



Mexico

Consejo Nacional de Ciencia y Tecnología (CONACyT) (National Council of Science and Technology)

Location of the Council in the government structure: Secretariat (Ministry) of Public Education

1. Functions

- Promoting and strengthening the development of science and modernising technology through the establishment of human resources at a high level
- Promoting and sustaining specific research projects
- Disseminating science and technology information

2. Priorities

- Consolidating the national system of science and technology in order to respond to the main demands of the country
- Solving problems and addressing specific needs in order to contribute to a better quality of life for the population
- Therefore it needs:
 - o Government policy
 - o Improved science and technology capacity
 - o Improved quality of private business, competitiveness and innovation

3. Report

- A national policy framework was formulated after intense national consultation with scientists, technologists, businessmen, academics and government

Available at: www.conacyt.mx



Mexico

Consejo Consultivo de Ciencias (CCC) (Science Advisory Council)

Location of the Council in the government structure: Presidency

1. Composition

- Individuals who have received, or will receive, the Science and Arts National Award
- Comprises a minimum of 25 members – currently 88 members (who are not remunerated for their services)
- The CCC executive secretariat provides administrative support. The executive secretary is appointed by the State President.

2. Line of advice

- The CCC produces studies, proposals and recommendations to address specific questions of the President.
- The issues raised by the Council are evaluated and analysed by the corresponding committee, work-group or commission. The findings are then submitted for approval, first by the Multidisciplinary Committee and later by the CCC as a whole, which meets in plenary session at least four times a year.
- All decisions and recommendations are taken by majority vote.

3. Functions

- Advising on the planning of national scientific and technological development and the formulation of policy that falls under the executive branch of government
- Serving as a channel between the scientific community and the chief executive
- Collaborating with public and private institutions, at both national and international level, regarding science and technology

4. Priorities

- Science and technology policies
- Strengthening the scientific and technological infrastructure
- Development of human resources
- Financing scientific and technological research and development
- Links between the public, private and social sectors and the national system of science and technology
- Decentralisation of and regional support for technological and scientific research
- Dissemination of scientific and technological knowledge
- Development of international relations in science and technology

Website: <http://www.ccc.gob.mx/>



Netherlands

Adviesraad voor het Wetenschaps- en Technologiebeleid (AWT) (Advisory Council on Science and Technology Policy)

**Location of the Council in the government structure: Ministry of Education,
Culture and Science**

1. Composition

- Comprises a maximum of 12 members, appointed in their personal capacities.

2. Line of advice

- Advises the government and parliament
- Operates independently of government ministries
- Publishes a variety of documents:
 - o Advisory reports – in the form of an official report
 - o Advisory letters to government
 - o Press releases – which accompany the publication of a report
 - o Background studies – used in preparing a report; compiled by third parties
 - o Working documents – background studies or reports that are not officially published
 - o Newsletters

3. Functions

- Advising the government and parliament on policy on scientific research, technological development and innovation
- Focusing on knowledge development, innovation-related policy and influences on the processes
- Providing solicited and unsolicited medium- to long-term advice

4. Priorities

- Scientific policy
- Innovation policy

5. Selected reports (Advisory reports)

- The Price of Success. Matching Research Subsidies in Knowledge Institutions
- Dutch Compass for the European Research Area. Strategic Framework for the Internationalisation of Research and Innovation Policy
- Knowledge Networking. The Absorption and Utilization of Knowledge by the Business Sector
- What Comes from Afar: Shaping Dutch Bilateral Research Policy

Available at: www.awt.nl/



New Zealand

Growth and Innovation Advisory Board (GIAB) – Established 2002

Location of the Council in the government structure: Ministry of Research, Science and Technology (MoRST)

1. Composition

The Board comprises 12 key people, with expertise and credibility across business, investment, higher education and labour.

2. Line of advice

- The full Board meets bi-monthly, and works through action groups on particular focus areas.
- It uses a wider group of advisors and expertise, as well as its own expertise and networks.
- Reference groups call on the expertise of both business and academia.
- The Board hosts forums to enable it to tap into a wider range of expertise to support particular work areas, and to facilitate communication between government and the private sector.
- The Board works with the key government growth ministries and agencies to support the development of advice and assistance to effectively meet the needs of the business sector, with a particular emphasis on encouraging cross-agency collaboration.

3. Functions

- Contributing to the evolution of the Growth and Innovation framework by identifying new opportunities for government and private sector actions in the following ways:
 - o Identifying emerging international trends on which New Zealand might capitalise
 - o Giving independent perspectives on priorities for future action in implementing the Growth and Innovation framework
 - o Acting as a sounding board for groups charged with implementing the Growth and Innovation framework.
- Brokering links between government and the business sector

4. Priorities

- Helping to determine the policies and practices that are likely to offer the best support to the growth of New Zealand's business sector in areas such as:
 - o Growth culture
 - o Infrastructure
 - o Agribusiness
 - o People and skills
 - o Business leadership–government forum

5. Selected reports

- Research Summary (19 April 2004)
- Generating Growth: Infrastructure
- Contribution of Land-based Primary Industries to New Zealand's Economic Growth
- Innovative Enterprises – Managing and Organising for Innovation
- Infrastructure

Available at: www.giab.govt.nz



Tunisia

Supreme Council for Scientific Research and Technology (CSRT)

Location of the Council in the government structure: Ministry of Higher Education and Scientific Research and Technology

1. Composition

The Council is headed by the Prime Minister and has membership from relevant ministries. A technical committee, attached to the Council, is headed by the Secretariat of State for Scientific Research and Technology and ensures the follow-up of Council decisions.

2. Line of advice

The Council falls under the Ministry (Secretariat of State) of Scientific Research and Technology, but is chaired by the Prime Minister.

3. Functions

Strategic planning, coordination and evaluation of all Tunisian-funded research and development, as well as the management of national research institutions

4. Priorities

- Commercialisation of research findings
- International science and technology cooperation

5. Selected reports

- Les Indicateurs de l'Enseignement Supérieur et de la Recherche Scientifique et Technologique
- L'Enseignement Supérieur et la Recherche Scientifique en Chiffres: Statistiques Annuelles

Available at: www.ercim.org/publication/policy/tunisia
and www.tunisiaonline.com



United Kingdom (UK)

Council for Science and Technology (CST)

Location of the Council in the government structure: Department of Trade and Industry

1. Composition

Members are respected senior figures drawn from across the field of science, engineering and technology. They are appointed by the Prime Minister, with guidance from the Office of the Commissioner for Public Appointments.

2. Line of advice

- Advises the Prime Minister and First Ministers
- The Council delivers its advice to the government by various routes, including published reports, confidential written advice and discussions with ministers, officials and special advisers.

3. Functions

- Advising the Prime Minister and First Ministers of the Devolved Administrations. The work of the Council is organised around five broad themes: research, science and society, education, science and government, technology and innovation.
- Serving as a top-level advisory body on strategic, cross-cutting science and technology issues
- Making more effective use of research and scientific advice in the development and delivery of policy and public services across government

4. Priorities

- Sustaining and developing science, engineering and technology (SET) in the UK and promoting international cooperation in SET
- Fostering the practice and perception of science, engineering and technology as an integral part of the culture of the UK
- Promoting excellence in SET education
- Promoting SET-based innovation in business and public services to promote the sustainable development of the UK economy, the health and quality of life of its citizens and global sustainable development

5. Selected reports

- Ten-year Investment Framework for Science and Innovation (2004)
- Knowledge-intensive Services and the Science Base (2003)
- Imagination and Understanding: the Arts and Humanities in Relation to Science and Technology (2001)
- Technology Matters: the Exploitation of Science and Technology by UK Business (2000)

Available at: www.cst.gov.uk

Chief Scientific Advisor

Professor Sir David King

**Functions**

- Responsible for the quality of scientific advice within the government
- Advises the government on science and technology policy

Priorities

- Transparency – a key feature in developing public confidence in the scientific base on which government policy is formulated
- Quality on the scientists in government
- Mitigating the effects of departmentalisation
- Articulating effectively the place of and need for good science
- Strengthening the place of science and technology in government

Website: www.ost.gov.uk/about_ost/csa.htm



United States of America (USA)

President's Council of Advisors on Science and Technology (PCAST)

Location of the Council in the government structure: Executive Office of the President

1. Composition

The Council comprises 23 members plus the Director-General of the Office of Science and Technology Policy (OSTP), who serves as the Council's co-chair. Council members are distinguished individuals from industry, education, research institutions and other non-governmental organisations, and are appointed by the President.

2. Line of advice

- The President's Council of Advisors on Science and Technology reports to the President through the director of the Office of Science and Technology Policy.
- When reports are produced, the director of the Office of Science and Technology Policy submits the report together with a memorandum, which goes through the normal White House clearing process and is ultimately delivered to the President via the offices of the staff secretary and clerk.
- Periodically, the President's Council of Advisors on Science and Technology also meets with the President in person.

3. Function

- Advising the President and others within the executive office of the President on the impacts of science and technology on domestic and international affairs
- Leading an inter-agency effort to develop and implement sound science and technology policies and budgets
- Working with the private sector to ensure that federal investments in science and technology contribute to economic prosperity, environmental quality and national security
- Building strong partnership among federal, state and local governments, other countries and the scientific community
- Evaluating the scale, quality, and effectiveness of federal effort in science and technology

4. Priorities

- Biodiversity: connecting with the tapestry of life
- Wellspring of prosperity – science and technology in the US economy
- Science and technology principles
- Principles for the role of the US government in science and technology

5. Selected reports

- Report on Sustainable Development (1997)
- Report on Research Universities
- PCAST Review of the National Science Board Report on Environmental Science and Engineering for the 21st Century
- Powerful Partnerships: the Federal Role in International Cooperation on Energy Innovation

Available at: www.ostp.gov/pcast/pcast.html



United States of America (USA)

National Science and Technology Council (NSTC)

Location of the Council in the government structure: Executive Office of the President

1. Composition

The President chairs the National Science and Technology Council. Membership comprises the President as chair, the Vice-President, the assistant to the President for science and technology, cabinet secretaries and agency heads with science and technology responsibilities, and other White House officials.

2. Line of advice

The National Science and Technology Council is a cabinet-level Council. It is the President's principal means of coordinating science, space and technology, as well as the diverse parts of the federal research and development enterprise.

3. Functions

- Coordinating science and technology decisions in policy-making
- Ensuring that science and technology policy decisions and programmes are consistent with the President's stated goals
- Helping to integrate the President's science and technology policy agenda across the federal government
- Ensuring that science and technology are considered in the development and implementation of federal policies and programmes

4. Priorities

- Setting clear national goals for federal science and technology investments in areas ranging from information technologies to health research
- Improving transportation systems
- Strengthening fundamental research
- Preparing research and development strategies that are coordinated across federal agencies to form an investment package aimed at accomplishing national goals

5. Selected reports

- National Plant Genome Initiative: 2003–2008
- The Microbe Project
- Discovery, Education, and Innovation: an Overview of the Federal Investment in Science and Technology
- Ensuring a Strong US Scientific, Technical, and Engineering Workforce in the 21st Century

Available at: www.ostp.gov/NSTC/html/NSTC_Home.html

Presidential Science Advisor

Dr John H. Marburger III

**Functions**

- Advising the President on the decision-making process through both direct and indirect avenues
- Serving as Director of the Office of Science and Technology Policy; chairing the President's Council of Advisors on Science and Technology and supporting the President's National Science and Technology Council (NSTC)
- Reinforcing the importance of science and technology
- Incorporating scientific research and education into programmes for combating terrorism

Priorities

- Greater funding to the enabling machinery needed to study atomic processes, including massive power and great k-rays
- Greater funding to nanotechnology and biotechnology
- The need for choices in funding multiple potential research programmes

Website: www.inforexport.gc.ca/science/UnitedState